# Class Tasks 4.12 Suggested Answers

## Lesson 4.12.1 & 4.12.2
## Relational and Logical Operator Activities

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# Class Tasks 4.12 Suggested Answers

## Lesson 4.12.3
## If Statement
## Activities

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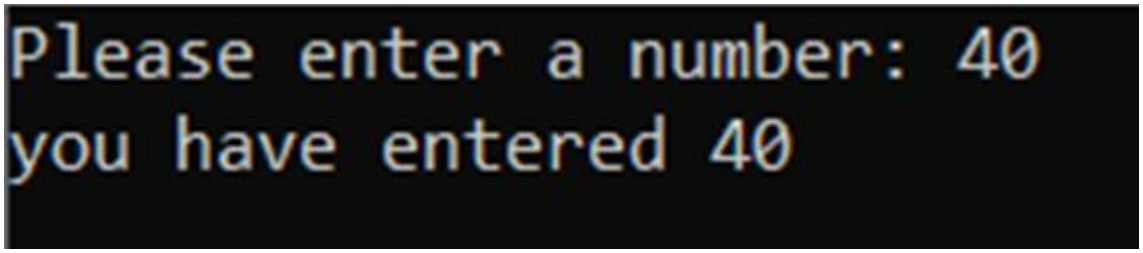
## Question 12.3.1 – Programming EASY

- Create an integer Variable userNum.
- Allow the user to enter a number.
- If the number is equal to 40, print “this is 40” otherwise don’t do anything.
- Pseudocode your answer first.
- The output should be exactly this:




**TIME ALLOWED: 5 Mins**

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## Code Answer

```
//declare a variable
int userNum;

//write out to the user
Console.Write("Please enter a number: ");

//parse the string input into a number
userNum = int.Parse(Console.ReadLine());

//if the  input = 40
if (userNum == 40)
{
    Console.WriteLine("you have entered 40");
}
```

## Pseudocode Answer

```
Int userNum

userNum = (int INPUT(“please enter a number”))

IF userNum equals 40 THEN

      PRINT( "You have entered 40")

END IF
```

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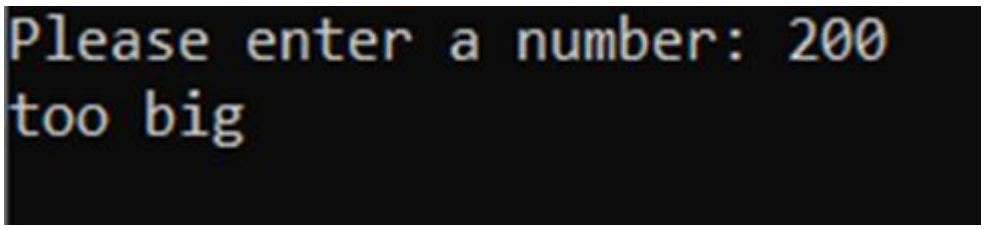
## Question 12.3.2 – Programming EASY

- Create an integer Variable userNum.
- Allow the user to enter a number.
- If the number is bigger than 100, print out “too big” otherwise don’t do anything.
- Print out the results to the console.
- Pseudocode your answer first.
- The output should be exactly this:




**TIME ALLOWED: 5 Mins**

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## Code Answer

```
//declare a variable
int userNum;

//write out to the user
Console.Write("Please enter a number: ");

//parse the string input into a number
userNum = int.Parse(Console.ReadLine());

//if the  input greater than 100
if (userNum > 100)
{
    Console.WriteLine("too big");
}
```

## Pseudocode Answer

```
Int userNum

userNum = int (INPUT(“please enter a number”))

IF userNum > 100 THEN

      PRINT( "too big")

END IF
```

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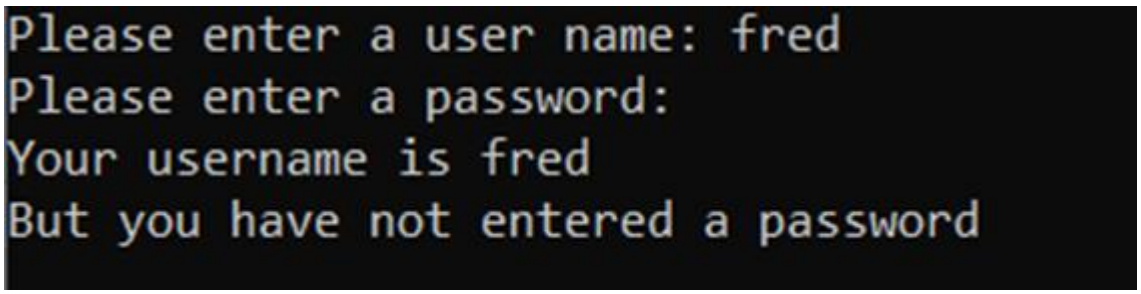
## Question 12.3.3 – Programming MEDIUM

- Allow a user to enter a username and password.
- Your program check that a password has been entered.
- If no password has been entered, you will display the following error message.
- Pseudocode your answer first.
- The output should be exactly this:




**TIME ALLOWED: 10 Mins**

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## Code Answer

```
//declare our variables
string userName;
string passWord;

//write out to the user
Console.Write("Please enter a user name: ");
//store the input in a variable
userName = Console.ReadLine();

//write out to the user
Console.Write("Please enter a password: ");
//store the input in a variable
passWord = Console.ReadLine();


//if the  input is EMPTY
if (passWord == "")
{
    Console.WriteLine($"Your username is {userName}");
    Console.WriteLine("But you have not entered a password");
}
```

## Pseudocode Answer

```
String userName, passWord

userName =  INPUT("please enter a user name")

passWord =  INPUT("please enter a password")


IF password == "" THEN

      PRINT( "your user name is " + userName)

      PRINT("But you have not entered a password.")

END IF
```

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## Question 12.3.4 – Programming MEDIUM

- Allow a user to enter a username and password.
- Your program check to make sure that BOTH a username AND a password have been entered.
- You will check your program using the inputs specified in the output screenshot.
- Pseudocode your answer first.
- Test your program with the following values:

```
Please enter a user name: fred
Please enter a password:
```

```
Please enter a user name:
Please enter a password: 12345
```

```
Please enter a user name:
Please enter a password:
you have not entered either a username or a password
```

**TIME ALLOWED: 10 Mins**

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## Code Answer

```
            //declare our variables
            string userName;
            string passWord;

            //write out to the user
            Console.Write("Please enter a user name: ");
            //store the input in a variable
            userName = Console.ReadLine();

            //write out to the user
            Console.Write("Please enter a password: ");
            //store the input in a variable
            passWord = Console.ReadLine();

            //if the username and password are missing, run the message.
            if (passWord == "" && userName == "")
            {
              Console.WriteLine("you have not entered either a username or a
password");
```

## Pseudocode Answer

```
String userName, passWord

userName =  INPUT(“please enter a user name”)

passWord =  INPUT(“please enter a password”)


IF password == “” AND username == “” THEN

      PRINT(“you have not entered either a username or a password”)

END IF
```

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## Question 12.3.5 – Programming CHALLENGING

- Allow a user to enter a username and password.
- Your program will detect if anything is missing.
- Your program will display **ONE AND ONLY ONE** error message to the user.
- Pseudocode your answer first.
- Test your program with the following values:

```
Please enter a user name: fred
Please enter a password:
you have not entered a password

Please enter a user name:
Please enter a password: 1234
you have not entered a userName

Please enter a user name:
Please enter a password:
you have not entered EITHER a userName or a password
```

**TIME ALLOWED: 10 Mins**

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## Code Answer

```
            //declare our variables
            string userName;
            string passWord;

            //write out to the user
            Console.Write("Please enter a user name: ");
            //store the input in a variable
            userName = Console.ReadLine();

            //write out to the user
            Console.Write("Please enter a password: ");
            //store the input in a variable
            passWord = Console.ReadLine();

            //ONLY the password is missing
            if (passWord == "" && userName !="")
            {
               Console.WriteLine("you have not entered a password");
            }

            //ONLY the username is missing
            if (userName == "" && passWord != "")
            {
               Console.WriteLine("you have not entered a userName");
            }

            //BOTH password AND username are missing
            if (userName == "" && passWord == "")
            {
                Console.WriteLine("you have not entered EITHER a userName or a
password");
            }
```

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## Pseudocode Answer

```
String userName, passWord
userName =  INPUT("please enter a user name")
passWord =  INPUT("please enter a password")

IF passWord == "" AND userName!= "" THEN
     PRINT("you have not entered a password")
END IF

IF userName == "" AND passWord != "" THEN
     PRINT("you have not entered a password")
END IF

IF password == "" AND username == "" THEN
     PRINT("you have not entered either a username or a password")
END IF
```

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# Class Tasks 4.12 Suggested Answers

## Lesson 4.12.4
## If.. Else Statement
## Activities

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